

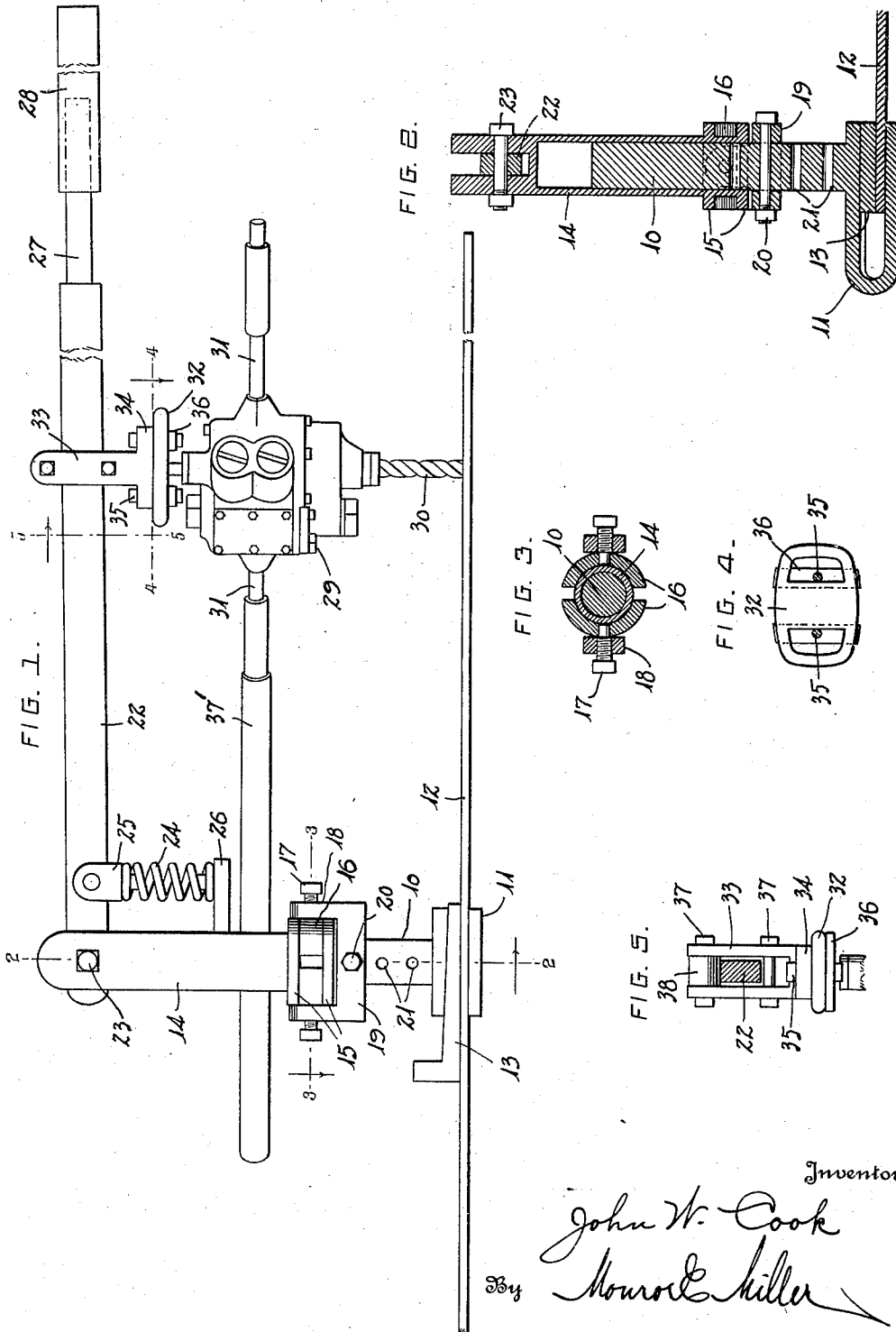
June 10, 1930.

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1,763,552

DRILL RIG

Filed May 5, 1928



UNITED STATES PATENT OFFICE

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DRILL RIG

Application filed May 5, 1928. Serial No. 275,469.

The present invention relates to drilling machines, and aims to provide a novel and improved rig for conveniently manipulating a power-driven drill, in order that holes may be conveniently drilled in a plate or sheet of metal.

Another object of the invention is to provide means attachable to a sheet or plate which is to be drilled, and adapted to support a power-driven drill in order that said drill may be conveniently positioned.

With the foregoing and other objects in view, which will be apparent as the description proceeds, the invention resides in the construction and arrangement of parts, as hereinafter described and claimed, it being understood that changes can be made within the scope of what is claimed, without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, wherein—

Figure 1 is a side elevation of the improved drill rig.

Figs. 2, 3, 4 and 5 are sections on the respective lines 2—2, 3—3, 4—4 and 5—5 of Fig. 1.

In carrying out the invention there is provided a post 10 having a horizontal U-shaped base 11 adapted to be disposed astride the edge portion of the plate or sheet 12 which is to be drilled, and a wedge 13 is driven between the plate 12 and upper part of the base 11 to clamp the post firmly in place. This affords convenient means for attaching the device to the plate, and the post 10 may be conveniently moved to different positions as the drilling progresses.

A sleeve 14 is telescoped over the post to turn thereon, and is also capable of vertical adjustment. The sleeve 14 has outstanding annular flanges 15 near its lower end between which arcuate swivel members 16 are disposed, and said members are held by screws 17 engaging through upstanding ears 18 of a collar 19 fitted on the post 10, thereby providing a swivel connection between the sleeve 14 and collar 19. A bolt 20 or other securing element extends through the collar 19 and post, said post having a vertical series of apertures 21 to receive the securing element 20, for the vertical adjustment of the sleeve 14.

A lever 22 is pivoted, as at 23, within the upper bifurcated terminal of the sleeve 14, and is yieldingly raised by a coiled spring 24 confined between the spring seats 25 and 26 secured to the lever 22 and sleeve 14, respectively.

The lever 22 has the free terminal portion 27 thereof rounded to receive a pipe 28, which may be used to increase the leverage.

The drill 29 may be of any power-driven type, and has the drill bit 30, the handles 31, and the pressure plate or member 32.

A hanger 33 is provided to support the drill from the lever 22. Said hanger has ears 34 at its lower end through which bolts 35 extend, and said bolts have clamping bars or plates 36 under the pressure plate 32 of the drill, to clamp said plate and hanger together. The lever 22 extends through the slot of said hanger, and bolts 37 extend through the hanger above and below the lever, a roller 38 being mounted on the upper bolt 37 to roll on the lever 22 so that the drill may be readily moved along the lever to different positions.

A piece of pipe 37' may be slipped over one of the handles 31 for conveniently sliding and positioning the drill when the lever 32 is raised to lift the drill bit from the plate or sheet 12.

When the post 10 has been secured on the plate 12, the lever 22 being raised by the spring 24 will lift the drill and support the drill bit 30 above the plate, so that the drill may be conveniently moved along the lever 22. The lever 22 may also be turned with the sleeve 14 in order to position the drill bit at the proper point for drilling the plate.

One man may manipulate the lever 22, while another man positions the drill. Then, by depressing the lever 22 the drill bit is forced through the plate, the lower bolt 37 providing a rounded fulcrum surface on which the lever 22 may swing and slide when forcing the hanger downwardly by the lever. Then, when the drill is lifted again, it may be moved to a new position for drilling the next hole.

Having thus described the invention, what is claimed as new is:—

1. A drill rig comprising a post, means for
attaching said post to a sheet or plate to be
drilled, a lever, means connecting said lever
with the post for the upward and downward
5 and horizontal swinging movements of said
lever, and a drill hanger slidable on said lever
and adapted to remain in vertical position in
a predetermined vertical axis when said lever
is swung upwardly and downwardly, said
10 hanger having a rounded fulcrum surface on
which the lever may swing and slide when
forcing the hanger downwardly by the lever.

2. A drill rig comprising a post, means for
attaching said post to a sheet or plate to be
15 drilled, a sleeve rotatable on the post, a lever
pivoted to said sleeve to swing upwardly and
downwardly, a drill hanger slidable on the
lever, a collar adjustable vertically on the
post below said sleeve, and a swivel con-
20 nection between said collar and sleeve.

In testimony whereof I hereunto affix my
signature.

JOHN WILLIAM COOK.

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